[p119a]

313 Cherán prefers shakes 5 *cuartas* in length, called "thick shakes" (tasámani tiápiti).
804 Shakes of 4 *cuartas* (1 *vara*) are sold primarily
438 in Uruapan and are spoken of as *de comercio*, or "small shakes" (tasámani sapírati). Shakes 6 *cuartas* long, preferred by some Tarascan towns, are called "long shakes" (tasámani iórati). In Angáhuan, shakes 5 *cuartas* long are sold in Zamora and are sometimes called Zamorana.

313 Shake makers usually work from 8 a. m. to 6 p. m. A week's work routine is as follows: On Tuesday suitable trees are sought and felled. Wednesday is devoted to cutting trees in sections. Thursday and Friday the timber is split into shakes. One day is spent drying the shakes in the sun, and, if the maker is a professional, the finished product is taken to Uruapan or Zamora on Saturday and Sunday for sale. On this schedule one person might make two bundles of 400 shakes (two irépitas) in a week.

313 Railroad ties are usually made under contract
● 439 arrangements. The workers leave town on Tuesday, usually arriving in time to cut a
397 week's supply of logs for splitting and shaping. Wednesday, Thursday, and Friday are spent in splitting and shaping the ties with the ax. Saturday the ties are checked by the contractor, and the men are paid in time to return home that night.

313 A minor industry is cutting out blocks of
322 madroña and jaboncilla wood. These are sold in Paracho, where they are made into doors,
438 spoons, wooden bowls, and the various small wooden objects for which Paracho is famous. A few people in Cherán also make broom handles.

314 A considerable amount of charcoal is produced on the more distant lands of Cherán. Several men in town make their living entirely from charcoal burning. Oak is used almost exclusively for charcoal. Charcoal burners usually spend from Monday until Friday in the woods, and return home over the week end. Charcoal is usually sold in the woods to dealers, the unit of sale being a stack 8 by 7 inches by 6 feet.

In a number of Tarascan towns turpentine production is an important industry. This has been true of Cherán in the past, but. for reasons not discoverable, output at present is

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243 good crop, although complete failure is rare. A little wheat is grown in town lots, where it seems to do better than in fields.

Wheat is harvested by hand with a sickle. [462] Men do most of the work, but women and children help sometimes. The plants are cut as close to the ground as possible, tied in sheaves, and transported to the houses. One, and in [407] 1940 two, small threshing machine is used in Cherán, but the bulk of the wheat is threshed by hand with flails. The flail used is a slender pole about 8 feet long. To this are fastened two or three heavy iron wires some 10 to 12 feet long. Threshing is done on any hard clean-swept ground when the weather is dry. One stone threshing floor exists at the end of Zaragoza Street. The owner is usually given a liter or so of wheat for its use, although it is built on public property. The straw is carefully saved, whether threshing is done by hand or by machine. Both men and women winnow [462] the wheat on windy days (pl. 3, center). The grain is stored in sacks.

Some wheat is consumed locally. It is 252 ground on the metate and made into bread or 439 atole. The bulk of the wheat is sold, however, to four mills at Purépero, Carapan, Tarataro, Jacona, or as far away as Morelia (since the highway has been built). Wheat is, indeed, probably the major cash export crop of Cherán. Prices and costs are discussed later.

MINOR CROPS

Barley.—Some barley is sown in June and harvested about October. Techniques of planting and harvesting are similar to those for wheat. Barley is fed to animals or sold outside the town. It is stored in sacks. Most barley is planted to restore failing cornlands, and the quantity is not important nor is it regarded as an intrinsically valuable crop.

Oats.—Although the growing of oats is reported, no farmer was found who had planted the grain. The quantity must be unimportant.

Beans.—The soil of Cherán is said not to be 244 good for beans; possibly the climate is also unsatisfactory. Whatever the reason, Cherán grows few beans and many are imported from the Lake Pátzcuaro region.

The principal bean grown is a small pinkish type called *criolla*. White, orange-yellow,

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244 brownish, and various spotted beans with much variation in size and shape were observed, and, in many cases, were named by informants. Until reports are received from botanists, the details of variation seem of little interest. All seem to be of climbing types.

Some people plant a few beans between the corn rows, usually in the garden. Mixing of corn and bean seed is said not to give good results. Separate planting of beans is rare, if it occurs at all. Beans are threshed by driving burros over the straw, or children may trample out small quantities.

Squashes and pumpkins.—A few pumpkins are grown in gardens for home use. The most common type is a squash known as chilacayote, although it is not grown abundantly.

The chilacayote must be planted 15 to 20 feet apart, for the plant spreads widely. Uusally it is planted in gardens. The fruit is large and green, resembling a watermelon in shape and color. The flesh is white and watery.

251 Some chilacayote is eaten fresh, cooked with
[252] brown sugar. Usually, though, it is cured by leaving it in the sun on roofs or wall tops for 2 or 3 weeks. Sometimes the squashes are coated with ashes mixed with water. This is believed to harden the exterior. After curing, they are stored in the "*troje*" or in the storage loft and saved until spring. Planting time is the traditional season for eating chilacayote, for this is a period when there are almost no fresh fruits or vegetables. The squashes sell
[435] for 25 to 50 centavos.

Broadbeans or habas.—Broadbeans (*Vicia*
244 *faba*), a coarse variety of European vetch, are usually planted in gardens or, more rarely, in the field. They are planted in furrows, like maize, and are cultivated similarly. Broadbeans yield well in Cherán but relatively few are grown, as they are not liked as well as ordinary beans.

Potatoes.—Planting of potatoes began in Cherán only 2 or 3 years ago. Apparently
[439] they do well but only a few are planted as yet, principally for sale in Mexican communities, for they have little place in Tarascan cookery. They are planted in April and harvested in November or December.

Chayote.—The chayote is not grown abundantly. Plants are found only in gardens,

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pulp is chopped. Three days later the chopped material is removed and the surface of the cavity is scratched with a rakelike implement. On the fourth day, collection of the juice begins twice daily. Each time juice is collected, the surface of the cavity is scratched with the rakelike implement. The juice is dipped out with a small pottery vessel and poured into a larger container. If the juice is to be shipped to Uruapan it is put in a 25-liter can. A good plant produces slightly more than 2 liters a day.

The bud of the wild agave is cooked in a round hole, 1 meter in diameter and 1 meter deep. The hole is filled with small stones to within 10 or 15 cm. of the top, and a large fire is built on top of the stones. When the fire dies down, the agave buds are thrown on it, covered with leaves of agaves and trees, and then sealed with earth. On the third day the oven is opened. The thick fleshy end of leaves of the smaller wild agave are also roasted. The season is from November to May.

Approximately 20 men in Cherán roast agave in season. They must eat sugar when the agave is cooking so that it will emerge sweet. They must also abstain from sexual intercourse during the 3 days the agave is in the oven.[10]

Pears.—The most important fruit in Cherán is the pear. It is carried by traders as far as Guerrero. Three types are recognized: *leche* (uérgamóte), *pardo* (ɛ́arápiti), and t'ačani (Spanish name unknown). The only significant difference recognized is that the three types mature at different times, although some say only the uérgamóte transports well.

Pear trees are always grafted on a rootstock of wild crab apple, *tejocote*. (This is a sloe-like fruit which bears a marked resemblance in flavor and appearance to the true crab apple.) The *tejocote* trunk is cut with a saw and then split. A pear graft is inserted at each end of the split, sealed in with wax, and wrapped in clean cloth. It is believed the grafts will grow only in January, February, and March, but a school teacher with experimental tendencies claims to have grown them at all seasons.

[10] Agave is of varying importance in other towns. In Angáhuan the techniques are similar. The plant is known here as quiote; the leaves are called ɨ́ɨ́kua, the stalk or bud, ámaá. Mastiended Chilchota makes mescal. The leaves are cooked in earth ovens, macerated with clubs in cement tanks, fermented several days, then distilled. The Tarascan terminology relating to the agave and its processing survives in part.

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Pears and other fruit trees are not pruned, cultivated, or fertilized. Fruit to be shipped, especially pears, is picked with a special implement to prevent bruising. Three narrow pieces of shake are cut to a point at one end. They are then tied with string to one end of a long light pole, forming a triangular funnel. The funnel is placed under the fruit and raised, detaching it gently from the tree (fig. 4).

FIGURE 4.—Pear picker, made of trimmed shakes, cord, and any convenient long pole. The fruit is caught in the opening, lifted until the stem breaks, and then lowered to the ground. Bruised pears will not stand shipment.

Miscellaneous fruits.—A bitter apple, *manzana agria* or *chata*, is grown in Cherán. A larger, sweet apple is grown in Pichátaro, but only four or five trees exist in Cherán.

Three kinds of peaches are grown in Cherán: *blanco*, a type with red flesh near the pit (name uncollected), a green peach (prísku), and a yellow peach (melókuta). Relatively few peaches or apples are exported.

Two kinds of cherries, black and white, are grown in Cherán. Both are dried in some quantities and are sometimes sold in the market at Paracho.

A few *zapote blanco* are grown in Cherán, but most of this fruit consumed in Cherán is imported. The same is true of plums.

The *tejocote* is said not to be cultivated, but it sometimes is planted deliberately along field borders and its fruit is used. As, with the exception of pears, this is all the attention ever given to other fruits, it is fair to include the

245 *tejocote* as a domesticated type. It is harvested and exported for making jellies and
[252] preserves. A few are used locally.
[439] Some quince trees are found in Cherán. They are little used, but some preserves are made.

BELIEFS AND CUSTOMS

241 Most beliefs and customs center about maize. Most important are the beliefs about red ears, čóču. A red ear is described as the mother, chief, and ače (ceremonial leader) of all maize. In the storage lofts, red ears are mixed in with the yellow and white to act as guardian of the rest. They are never eaten until all the white and the yellow corn are gone. Care is taken to plant seed from one or more red ears in each field; otherwise it is believed that there will be no harvest.

[755] Red ears and black ears are both said to be used in curing, but no details could be secured.

Twin ears, *cuates* (šaninkuáte), are said to come because God wishes to send a little more. Sometimes large ears have four or five points; they are said to be the hand of the planter.

[782] The family harvesting the first green corn in the town places two or three ears on the altar of San Francisco. Each family gives one or two *cargas* of maize on the cob to the priest.

789 If the rains do not come at the proper time near the end of May, the image of San Ramos
[778] is taken to the peak of San Marcos. The image is placed on a white sheet, held by a man at each corner, and tossed in the sheet. If San Ramos can be made to cry, it begins to rain immediately. During the rite a *rezador* recites a rosary, copal is burned, and *cohetes* are fired.

241 Every year, beginning in January, the grass is burned, causing great damage to the forests and destroying the last remnants of pasture. The burning is said to prevent heavy frosts, while the smoke hastens the coming of the
[632] rains. Town officials and officers of the Forest Service succeeded in extinguishing most of the fires in 1940.

It is said there are no beliefs regarding wheat. Nevertheless, wheat must be carried in a wooden bowl while sowing or it will be attacked by rust, "*tecolote.*" Rust is a sign the planter used his hat, blanket, or some other improper article at planting. Girls plait elab-

939 Both men had arrived with the highway construction crews; neither was making what he regarded as a satisfactory living and both hoped to leave.

Tile and brick are made in an old chapel and surrounding grounds, formerly part of the *curato* or curacy. Ten percent of the finished [427] tile or brick is given to the *municipio* as rent [632] for the buildings and for the right to dig clay on public lands.

A grayish clay is brought to the factory in sacks by mules. It is mixed with water and manure in a board-lined pit in the patio, where it is turned with spades and hoes and trodden with bare feet. The mixed clay is pressed into a trapezoidal wooden form laid flat on a table (fig. 5). The top is smoothed carefully with the wet hand. The clay is then slipped off the table onto a wooden form resembling half of a truncated cone, but with a handle. After a few moments, the clay, now in the shape of a tile, is slipped off on the floor. When fairly well dried, the tile is moved outdoors for further drying.

Bricks are made in the same fashion but with a different wooden form. Both brick and tile are fired in a wood-fired kiln in the patio. The wood is cut and hauled by the brickmakers and tilemakers. The time required to make a thousand brick or tile is about 9 days, as follows:

	Days
Getting and mixing clay	2
Cutting and hauling wood	1
Shaping 1,000 brick or tile	5
Loading kiln	1
Total	9

TEXTILES

285 *Mats.*—Most sleeping mats used in Cherán are imported, but at least three women make them locally. The mats are made of tules im- [438] ported on burros from Erongaricuaro on Lake Pátzcuaro. The mats are made in twilled technique, usually treating two tules as a single weaving element. The only tool observed was [412] a stone fist hatchet for severing tules.

294 *Hat making.*—About four men manufacture men's hats of palm straw braid, although pro- 439 duction does not meet the local demand. The activity involves complex trading arrangements, for palms do not grow in Tarascan terri-

294 tory. Palm leaf originates in Ario de Rosales, whence it is transported to the market at [439] Paracho. Weaving of the straw into braid is [438] done by women of the several small villages in the *municipio* of Paracho. The finished braid is sold in the Paracho market, the bulk of it going to the village of Jaracuaro on an island in Lake Pátzcuaro. The thread used for sewing the braid is an imported machine-made thread.

The tools of a hat maker include:

[413]

Sewing machine
3 or 4 hat blocks
Wooden paddle for blocking
Smooth stone for blocking
Wooden reel for thread (which is bought in skeins)
Iron punch for ventilators
Roller like a clothes-wringer for straightening and smoothing braid

The type of hat most commonly made has a low crown and broad brim. Each hat requires about three bundles of braid. The braid is sewn together in a spiral beginning at the middle of the crown. Each spiral of the braid overlaps its predecessor about three-quarters or five-sixths of its width. One man, working steadily, can make about three hats a day, but no one in Cherán works steadily every day. [463] Essentially, hat making is a part-time occupation. Some hat makers are also farmers, while one is also a "tailor." Another also operates a *nixtamal* mill. One hat maker employs an assistant who is said to be paid 50 centavos a hat. This is doubtful in view of hat prices and the cost of materials.

294 Sometimes hats are whitened. They are
386 first treated with glue, then successively coated with *oxido* (a crystalline material melted down), a white pigment (*blanco de sin*), and then a white varnish (*blanco de España*). None of these materials was further identified. The price obtained for hats varies with the thinness of the braid, fineness of the sewing, and the finish applied.

Embroidery, crochet, and drawn work.—A
286 number of women ornament women's blouses
531 or make crocheted petticoat borders as a part-
[467] time occupation. Women's blouses are sometimes equipped with crocheted yolks. Crocheted bands are also placed on the short blouse sleeves. Bands of embroidery for the bottoms

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296 tensive labor, although the weavers usually do some housework also.

CLOTHING AND DRESS HABITS

294 *Clothing manufacture.*—Many persons make their own clothes, but a number of persons 463 make clothes for sale or on order. Even men may make clothes for sale if the family owns a sewing machine. For example, one storekeeper makes men's cotton trousers (*calzones*) and men's shirts in his spare time, selling them in the store. His wife also sews but less frequently. Many storekeepers have one or more sewing machines—the largest number observed was three—which are rented to women who come to the store to sew. One ambitious family (whose sons were sent to Morelia to school) made much of the family income from the labor of mother and daughters. Most of the sewing is durable but not skilled. No one in the town [511] knows how to fit a garment, and as standards [177] approach those of the Mestizos, more and more people buy ready-made garments from outside [439] in stores, markets, or in Mestizo towns.

Most of the "tailors" are specialists, making only one type of garment. One woman makes only men's cotton trousers. She makes six pairs a day, double-stitched. Garments for weddings are single-stitched. The cloth is provided and cut by the customer. This woman works only intermittently on order. Trousers require about 2½ m. of cloth. Men's shirts require about the same amount of material but cost more for sewing. One woman makes only aprons, while another makes only children's garments.

291 *Men's dress.*—Influence of the Mestizo world is strongly evident in men's dress. Yet, aside 177 from the priest, no resident of the town dresses completely *catrin* (i.e., in city style) in Cherán, and only rarely do individuals going to Uruapan or some other town wear city dress. Many men, it is true, commonly wear one or more garments of "town" style. Coats, sweaters, and jackets are owned by many. Tailored woolen trousers, on the other hand, are rare, while almost none own complete suits. Ordinarily, the cotton trousers of the Mestizo countryman rather than woolen trousers replace the white *calzones* of the Indian.

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[p.59a]

438 Recognition of the interrelations of various
439 economic activities in different regions is not a new idea to the Tarascans. The economy of the region tends toward individual and local specialization with a consequent high development of trade. While undoubtedly the majority of the Tarascans are members of self-sufficient family groups so far as the bare necessities of existence are concerned, very large numbers are partly or wholly dependent upon employment, manufactures, or trade. Consequently, the internal economy of a Tarascan village not only is complex by primitive standards but also fits into tribal and extratribal patterns of even greater complexity. Quite apart from relations with the national economy of Mexico, and, through it, with international economy, large numbers of Tarascans have been traders and middlemen on a large scale. Not only have they carried local products from Tarascan village to Tarascan village, or outside the Tarascan area; they have bought goods in non-Tarascan areas to sell in other non-Tarascan areas. The study of Cherán economy, then, must be considered an incomplete picture of Tarascan economy just as the study of the economics of a single small town would inadequately describe the economics of the United States.

804 The following tabulation gives the units of measure used in Cherán.

CHERÁN UNITS OF MEASURE

Dry measure

1 *litro* = 1 liter, or 0.908 quart
1 *medida* = 5 *litros*
1 *fanega* = 20 *medidas*, or 100 *litros*, or 1 *hectalitro*

Weight[1]

1 *libra* = 1 pound
1 kilo = 2.2 libras
1 *arroba* = 11.5 kilos
1 *carga* = 161 kilos or 14 *arrobas*
1 burro load = ½ *carga* (approx.), 7 or 8 *arrobas*
1 mule load = 1 *carga* (approx.), 14 to 18 *arrobas*

Capacity

1 cuartillo = 1 pint or ½ liter
1 *litro* = 1 quart (approx.) or 1 liter
1 *decalitro* = 10 litros

Square measure

1 *hectarea* (hectare) = a piece of land about 10,000 sq. paces or 10,000 sq. m.

[1] The beam balance is widely used for determining weight.

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804 *Cubic measure (used in masonry)*
1 *barra* = 1 yd. × 1 yd. × 16 in.
1 *metro* = 1 m. × 1 m. × 50 cm.

PRODUCTION

433 439 Production in Cherán depends more directly upon the land than it does in most other Tarascan villages. Although the land ultimately is the source of all Tarascan raw materials, some industries require relatively few of such materials. In some cases—for example, the straw hat industry—all the raw materials are imported from outside the Tarascan area. Even more numerous are instances where the raw materials are secured from some other Tarascan town.

While Cherán economy is primarily self-sufficient in character, it is less so than are most Indian economies of Mexico. Cherán does supply most of its own basic food and housing needs, but it does not supply its own clothing. Moreover, many foods every Cherán resident desires are not produced locally. Numerous Cherán families also depend on wages more than upon their own direct exploitation of the land or upon industry. Finally, Cherán produces many goods for export, although to a far less degree than neighboring Paracho.

LAND

423 Tarascan land is of three main types: farm, forest, and residential. To these might be added public roads, water courses, and mineral deposits. The latter are relatively unimportant. Public roads and trails of course serve communications and do not enter directly into production. Water courses are also mainly in the public domain. Virtually their only use is to supply drinking water for man and beast and for washing purposes. Public lands also supply the small requirements of sand, clay, and building stone.

All permanent farm lands are privately owned. The only exceptions are occasional temporary fields cleared from the forest on lands too steep for cultivation for more than a few years. On the farm lands the major products are white or yellow maize and wheat. Beans, squash, fruits, oats, and barley are produced only in small quantities.

243 The best wheatland produces about 2 *cargas*
433 of wheat per hectare; lands producing less than 1½ cargas are seldom cultivated. The wheat must then be threshed before sale, and this will cost $2.50 a *carga* in the mill and about the same if threshed by hand. The wheat will sell at from $22 to $30 a *carga*, depending upon the market ($26 in 1941).

243 The return in cash, then, is between $33
434 (1½ *cargas* at $22) and $60 (2 *cargas* at $30). The net profit in terms of our calculations would vary between minus $10.67 and plus $15.08. This figure does not count the labor of carrying the wheat to the house and thence to the mill, or winnowing; neither does it include the value of the straw (used as feed). Again, however, the Cherán farmer who received $33 for his year's work on a *hectare* would count himself relatively fortunate.

The return from wheat is less than the potential return from maize cultivation on average land. In general, however, wheat is usually grown on lands giving a poor maize yield. Moreover, the demand for wheat appears to be
243 more stable, and in days when transport was
434 all on pack animals the greater value of wheat
438 per volume and weight made it much more
[491] attractive as an export crop. The opening of the highway may alter the situation, as it makes bulk transportation of maize feasible. On the other hand, the highway has opened up new markets for wheat. Trucks from the large
[439] flour mill at Morelia now come to buy wheat in Cherán and even penetrate to mountain villages such as Pichataro. Consequently, a much wider market is available than the regional mills that could be reached in a day or a little more with burros. Of course, similar expansion of markets is available to maize growers and producers of other products. It is still too early to predict the effects of improved communications on the agriculture of Cherán, but some additional considerations are discussed in connection with trade.

243 Another way of disposing of wheat is to sell
256 it at a flour mill in a Mestizo town or convert
434 the wheat into flour and sell the flour. The
438 price paid at flour mills is about $4 a *carga* above the Cherán price. Mills charge an 18 percent discount if the farmer chooses to have his wheat milled. This covers waste, bad

294 433 434 [435] Some persons make and sell finished garments. Men's trousers or blouses require about 2½ meters of material, at an average cost of about 30 centavos a meter. One woman specializes in children's garments. She claims to make 3 to 4 dozen children's garments a week, selling them at 80 centavos to $2.50 apiece (including materials). Her profits vary. A child's rayon dress requiring $1.50 worth of material she sold for $1.75, while for a cotton dress requiring $0.40 worth of material she charged $0.80.

[439] All fitted or tailored garments, which are growing in popularity, are imported. A widely heard comment was that anyone in Cherán who could make and fit garments, especially men's shirts, would make great profits.

MINOR ACTIVITIES

433 434 [394] *Candlemaking:*

Cost of wax (per kilo)	
Sales of candles from 1 kilo of wax	$2.25–$2.50
Possible profit (excluding labor and equipment)	$0.50–$1.00

[283] *Rope making (horsehair):*

Horsehair $0.50 per kilo	$0.37½
Labor	1 day
Sale price	$1.50
Gross profit per day	$1.12½

Comment: Only one man was found who made ropes. No data were secured on agave fiber ropes made by the same man, nor on the time taken in marketing and securing raw materials. As all the equipment is home-made and very little capital is needed, the gross profit probably is close to net profit except for the factors mentioned.

295 433 434 [435] *Shoemaking:*

Equipment:	
Sewing machine	$55.00
Lasts	?
Knives	?
Labor:	
1 cheap pair of shoes per day is produced by a shoemaker and 2 unpaid apprentices	
Value of product (per pair)	$3.00–7.00
Estimated gross income:	
Per day	1.50
Per pair of shoes	1.50–3.50

Comment: No clear picture of the economics of this industry was secured. The selection and purchase of hides involves knowledge of tanning, size, and quality of the hide. Guarache makers apparently earn as little as 20 centavos a day, but there are no full-time professionals in town. All local manufacturers make guaraches to order and in claiming they make only one pair a day, they probably mean they do not attempt to make more than one pair a day.

281 435 434 *Tanning:*

Charge per cowhide	$5.00–$10.00
Charge per sheepskin	.50
Average daily return	1.25

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389 Materials and prices:

	Per kilo
433 Nitrate	$1.70
Chlorate	5.00
434 Sulfur	.80
Fiber string	1.00
Shakes, cane, etc.	Nominal

(Shakes are $5 a bundle of 400, but the number used is small; 3 or 4 per dozen *cohetes*, for example.)

Comment: Cohetes are made to order and sell at $3.00 to $4.00 per dozen. *Castillos* or set pieces are done on contract. Gross income from this source was at least $400 in 1940. Between times *cohetes* were made fairly steadily. Probably the fireworks maker's income is above average.

DISTRIBUTION

439 The problem of distribution affects primarily those goods which are exported from Cherán and those things which are imported. Only a small fraction of the materials produced locally are sold locally; in the main each family produces the local products it consumes and sells its surplus for export.

The export goods of Cherán consist almost wholly of forest products and farm products. The first are usually sold on contract or are transported by the producer to market. Railroad ties, for example, are always cut on contract. Charcoal is mostly sold to dealers from Zacapu and is delivered to the nearest spot where it can be picked up by trucks. However, there is some small local sale, mostly for operation of producer gas generators for *nixtamal* mills, and a little is carried on burros to such a town as Uruapan. Similarly, planks and beams are mainly sold, either to dealers who pick them up in trucks for export or locally on contract to someone building a house. In towns close to Uruapan, Zamora, or other centers, much of the sale of such products as charcoal, planks, and beams is direct, the maker carrying the goods to town on market day.

The major exception to the marketing methods for forest products described above is tejamanil, or shakes. For the local market, the shake maker usually works on order. For the export market he usually takes his product on burros to some nearby Mestizo town. These expeditions may be combined with other trading operations. Thus, shakes may be taken to Turetan via Nahuatzen, Tingambato, and Ziracuaretiro, a full-day trip with burros from 5

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439 a. m. to 8 or 9 p. m. As Turetan is considered the source of the best bananas in the region, a return load of bananas frequently is purchased. Tejamanil may also be taken to Uruapan, Zamora, or Zacapu.

Marketing of farm produce follows several patterns. Bulk crops, such as maize and wheat, are today sold mainly to dealers who come to town with trucks to carry off their purchases. Maize and wheat are sold as far away as Morelia. While large farmers may sell quantities directly to such dealers, the storekeepers also play a considerable part by their purchases of small quantities of corn or wheat. Most of the purchases in this case are of one or two *almuds* at a time when the family happens to need a few centavos. Nevertheless, some wheat is carried to the mills by the owner on burro back, and corn may be taken to one of the larger markets. Individual small-scale buyers also occasionally visit the town, mainly to purchase eggs, chickens, or even small pigs. Today they arrive by bus, as a rule, and put in the day going from house to house, generally taking their purchases to Uruapan for sale.

Some local vegetables and fruit are also taken for sale to Paracho or, more rarely, to Uruapan. Bread, atole, or tamales may also be carried to market by the women. The most important fruit export, pears, is often carried considerable distances into Colima or into Guerrero. Sometimes the owner will carry his own pears, but more frequently a regular trader or *viajero* will buy the fruit. Other exported fruits include tejecote, cherries, apples, and quinces.

Another aspect of distribution, naturally, is concerned with the supplying of imported goods to the inhabitants of Cherán. Practically all manufactured goods used in the village are imported. This applies not only to machine products but to household industries as well, for the specialists of Cherán in no field supply all the local demand. Three principal agencies of distribution exist: First are the stores, specializing primarily in machine products; second, are the local markets, although for everything but foodstuffs the principal occasions are when fiestas occur; third, are the *arrieros* or *viajeros*, the traveling traders of Cherán who bring back products from as far away as the Balsas Basin in Guer-

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

439 rero or even from the Pacific Ocean. Even men who are not regular traders will go on local market. Finally, it should be noted that individuals often visit markets, especially those in Paracho or during fiestas at nearby towns, [494] and make purchases of needed goods. Especially since the highway has brought bus service to the town, for important purchases a man may even go to Uruapan. It is not uncommon for well-to-do men, for example, to have garments made to order by the tailors in Uruapan.

It is impossible to compile from present data a complete list of the products imported into Cherán. The list extends from chile and beans to horses and sewing machines. Many articles are available only on special occasions. For example, the almost universally used type of water jar in Cherán is made only in Patamban, and is offered for sale only on the occasion of the fiesta of the patron saint in October. Householders must anticipate their yearly needs of these fragile (but quite long-lived) articles at this time; otherwise they are forced to attend a fiesta in some other town and pick up a different plain style of jar made in Uruapan or La Cañada.

Nearly all goods sold in the stores are im-
438 ported (except occasional local products such as clothing). A considerable list of these goods is given in the discussion of price (p. 88). Tarascan products imported include fish and tules from the Lake area; hat braid of palm straw, chairs, tables, beds, and various wooden objects from Paracho; pottery from Santa Fe, Quiroga, Patamban, La Cañada, and the "hot country," or *tierra caliente* (the last is non-Tarascan); axes from Tingambato; knives, machetes, plow points, and jewelry from Nahuatzen; oils, garlic, spices, and vegetables from Zacapu and the Lake region; *rebozos* and cloth from Paracho, Nahuatzen, and elsewhere; pigs from La Cañada; beans from the Lake region; chiles from various places; and a variety of fruits. The latter include bananas, coconuts (from non-Tarascan sources), sweet and sour lemons, oranges, guavas, mameys, plums, mangoes, watermelons, cantaloups, avocados, zapotes of all sorts, and cherimoyas.

439 From non-Tarascan sources, but still outside the more conventional commercial channels, are

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.766] Sierra Tarascans

439 to be mentioned pottery from Guanajuato (and even from Oaxaca), dried meat from *tierra caliente*, cattle, and horses. Machinery and tools made in industrial establishments include axes, saws, hoes, hatchets, plow points, engines (for *nixtamal* mills), sewing machines, flat irons, and, quite rarely, radios, phonographs, typewriters, and trucks. The functioning of the principal distributive agencies will now be examined in some detail.

TRADERS

441 A fair number of men in Cherán who engage in trade are known as *arrieros* or *viajeros*.
439 Whether there is any distinction between the two is uncertain. The impression received—and it is no more than an impression—is that originally the *arrieros* traveled to distant places outside of Tarascan territory, while the *viajeros* traded among the local villages. At present the two terms seem to be used as synonyms.

In the town voting register a number of men are listed as *arrieros*. Nevertheless, so far as could be learned, none of them dedicates all his time to trade. At the same time, there were numerous other men listed as farmers or laborers, yet who make fairly regular trading trips. The main distinction seems to be that a man listed as an *arriero* ordinarily makes about three long trips a year, while other men may make only one. Some men who make fairly regular short trips are not listed as traders. For example, one man who carries palm leaves regularly to the Paracho market is not included.

The main season for trading is from late fall until June, that is, the dry season. The principal routes followed for long trips are to Guerrero, Coalcomán, and Colima. A good many shorter trips may be taken to local fiestas, especially the great fiesta and market at San Juan Parangaricutiro. In addition, some men go to Guadalajara and Celaya for goods to carry to Guerrero. Finally, a long trip usually involves a number of short local trips around Cherán, either to purchase goods for transport to the *tierra caliente* or to dispose of merchandise brought back.

[462] The *arrieros* are all men, with a single exception (reported but not seen). Wives, however, frequently accompany their husbands. Sickness is the greatest hazard. Women are

441 Women are
439 believed to be more resistant to the illnesses of
[927] *tierra caliente*, and tales are told of women who saved their husbands by nursing them or by bringing them back to the healthful highlands. For this reason, traders rarely go alone, although large parties are rare. The major
[164] disease appears to be malaria. Insects, especially one attacking the feet, are mentioned as a great bother.

Robbers are also a source of danger; how-
[674] ever, the most traveled route—that to Guerrero —is said to be entirely safe. Some of the greatest dangers on the route to Coalcomán or Colima seem to have been in Tarascan territory. The village of Capacuaro had a particularly evil reputation at one time.

[492] Goods are ordinarily transported by burros. A poor man may have to carry goods on his back. The *arrieros* never ride except when
[497] seriously ill. An exception is that journeys to
[494] Celaya are made on the train, while nearby trips may sometimes be made by bus since construction of the highway.

The first step in a trading expedition is the assembling of goods for the trip. These may consist of pears from Cherán; apples from Pichataro; wooden products (*"tornillo"*) from Paracho; sweetpotatoes from San Francisco; fine pottery (not cooking ware) from La Cañada, Guadalajara, or Quiroga; oils and spices from Pátzcuaro; dolls, pottery, and other goods from Celaya. Most of the goods carried by Cherán traders, however, are local in origin, i.e., within the Tarascan area. In such cases, trade goods either are assembled by one or more short preliminary purchasing trips or are bought en route. Guadalajara pottery requires a 7- or 8-day trip each way with burros. Celaya goods, as stated, involve a trip by train.

On the return trip various products are brought. From Guerrero come dried fish, dried beef, gourds, gourd containers, coconuts, and cheese, the last being most important. Few data were obtained on the products brought from Coalcomán, as few Cherán traders make this trip, but cheese and dried beef are probably the most important items. However, the one trader to give specific information bought beeswax. Chiles are brought from Colima.

Generally the goods brought back are not sold until Cherán is reached. Then they are

439 441 sold locally (usually a minor part) or taken to the weekly Paracho market or to fiestas in nearby towns. Often goods are kept some weeks if there is a prospect of a scarcity developing, or an important fiesta is scheduled.

The majority of the long trips are to Guerrero, usually to Petatlán, where the fiesta of Holy Week attracts the greatest number of Cherán traders. The length of the trip taken depends to some extent on the rapidity with which goods are sold; once stocks are exhausted, traders turn back. One trader reported having reached Acapulco on one of his trips.

Some typical trips follow:

441 439 487 M. F. goes on Sunday to Paracho, where he awaits his trading partner from another town. Monday the two go to San Francisco and buy sweetpotatoes. Thursday they arrive in Tepic (Colima) and sell the sweetpotatoes. Friday they go to Guajuya (Jalisco) and buy chiles. Monday they return to Tepic and Saturday M. F. reaches Cherán. The trip involves 12 days' traveling and 2 days' resting, buying, and selling.

The schedule in detail is as follows:

Sunday	Paracho
Monday	San Francisco
Tuesday	Periban
Wednesday	Buena Vista
Thursday	Tepic
Friday	Guajuya
Monday	Tepic
Tuesday	Buena Vista
Wednesday	Periban
Thursday	San Francisco
Friday	Paracho
Saturday	Cherán

Some traders go to Colima proper by way of Zaragoza, but details were not obtained. It is 17 days' travel each way.

M. F. also goes to Coalcomán, carrying pottery from La Cañada which he buys in Cherán or Paracho. The route is the same as far as Tepic. Thence he stops at Obregón, Las Parotas, and Coalcomán. The round trip takes 3 weeks, of which 18 days are spent in traveling.

On his trips to Petatlán, Guerrero, M. F. buys wooden toys from Paracho and pottery from Santo Tomas. Starting on a Thursday, he goes to Pichataro. On Friday (market day) he is in Pátzcuaro and buys garlic, oils, and

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34

441 439 487 spices (*marjoram, pincente,* etc.) The trip to Petatlán takes a total of 18 days (see itinerary below); San Gerónimo is 5 days farther. A round trip usually takes about 6 weeks.

J. G. also leaves on a Thursday. Leaving his burro at Pátzcuaro, he goes to Quiroga to buy pottery (probably on the bus, as he does not take his burros). Returning to Pátzcuaro, on one trip he bought 500 strings of garlic, 15 liters of oils at $1.50 a liter (salad oil, olive oil, *aceites de razar, malza mantequilla, canaldo, mastral,* and *verbena*), and spices (*pimiente,* rosemary, *mandruje, flor de azalco,* a[illegible] *manzanilla boraja*), and 2½ dozen wooden spoons of assorted sizes.

At Paso de la Vaca, J. G. began to sell a little, but only enough to buy food (he had run out of money). His itinerary is similar to that of M. F., but he made one more stop. On his return he loaded one burro with dried meat and rode the other because he was sick. For the same reason he spent 8 days at one place. The two itineraries follow:

Arrive	*M. F.*	*J. G.*
Pichataro	Thursday	Thursday
Pátzcuaro	Friday	Friday
Santa Clara	Saturday	Saturday
Ario de Rosales	Sunday	Sunday
Alinonzita	Monday	.....
Corral de Piedras	.....	Monday
Cayaco	Tuesday	Tuesday
Guadaloupe	Wednesday	Wednesday
Río de las Balsas	Thursday	Thursday
Paso de las Vacas	Friday	Friday (began to sell)
Limón	Saturday (began to sell)	.....
Zopilote	.....	Saturday
Tepehuaje	Sunday	Sunday
Colmenaros	Monday	Monday
La Unión	Tuesday	Tuesday
La Onia (close to Pacific from here on)	Wednesday	Wednesday
Pantla	Thursday	Thursday
Puerto Sijuatanejo	Friday	Friday
Cuicuayul	.....	Saturday
San Geronimito	Saturday	Sunday
Petatlán	Sunday	Monday

San Gerónimo is 5 days' traveling beyond Petatlán; Acapulco is 6 days' traveling from San Gerónimo.

Another example is C. S. C. who makes only one trip a year, a visit to Holy Week in Petatlán, Guerrero. He carries woodwork from

1:Beals E-5 (1940-1941)1946 NU34 Tarasco NU34
[p.178]

Paracho and brings back coconuts and dried meat. He normally travels only a half day. (However, his half day would mean a dawn start and continuing normally until midafternoon.) His stops are as follows: Pichataro, Sirawén, Ario, Las Palmas, La Playa, Cayaco, Guadaloupe, Las Balsas, Corcoles, La Limón, Tepehuaje, Colmeneros, La Unión, Pantla, Puerto Sijuatanejo, San Geronimito, and Petatlán.

Arrieros probably have superior techniques for handling burros. *Criolina* is carried for treating saddle sores, and burros are shod "when the burro catches cold in his feet." Dysentery (*"posición"*) is the most frequent cause of loss of burros on trips.

Arrieros also observe special ceremonies. A candle and prayer are offered to San Antonio before going on a trip, and thanks are rendered on return. The *arrieros* also maintain a *mayordomía* for San Antonio, which is described elsewhere.

In general, knowledge of the economics of the *arrieros'* activities is unsatisfactory. It would be extremely difficult to gain an accurate idea of the amount of goods exchanged by this method or to discover the monetary or other rewards obtained by the *arriero*.

The importance of the *arriero* class undoubtedly will wane rapidly with the extension of highways and truck trails. Already the importance of the *arriero* in the Coalcomán region has greatly diminished as a result of truck trails opened up in recent years. When a direct connection is made between the highland and the developing truck trail system in the Balsas Basin, the *arriero* probably will rapidly disappear.

TRANSPORTATION

As has been indicated at various points in the preceding pages, the burro is the most common means of transportation still, supplemented occasionally by horses or mules. Poor traders may even make long journeys carrying their goods on their backs. Nevertheless, a revolution in transportation is under way in Cherán.

One alteration in the transportation picture is the truck which picks up bulk goods in Cherán for markets that formerly were closed to these items. As much as 4,000 kilos of wheat has

796 vow at the first opportunity. Of course, as all thrifty Tarascans would, he also made the event a business occasion, taking advantage of [443] the big market at San Juan on the day of the fiesta by carrying several burro loads of apples from Pichátaro. The San Juan fiesta is the [439] occasion of the major interchange of goods between the temperate region and the Balsas Basin.

788 Pilgrims to the San Juan fiesta come from a distance of as much as 22 days' journey, and 796 obviously many of them are not Tarascans. Often individuals will take vows to go part way [785] on their knees, wear a crown of thorns, carry a sack of cactus on their shoulders, or do other types of penance on the way. It is believed that [755] invalids may be cured if they dance before the image in the church. Those who cannot dance may be cured by rubbing them with pieces of cotton passed over the "ulcers" on the Christ image. Many also dance from the edge of the town to the church when they first arrive. It is believed that anyone who laughs at the dancers will become paralyzed and must himself dance in order to be cured. Others say everyone must dance on entering the town or he will never be able to dance again.

796 The fiesta at nearby Paracho on October 20, that of Santa Ursala, offered some interesting points. Each side of the path through the atrium to the church was lined with posts covered with moss, paper flowers, and palm leaves. On two strings between the posts were hung paper flowers and paper candle lanterns in bright colors. The inside of the church was decorated with ropes of pine needles and candle lanterns also.

In the same town, for the fiesta of the patron saint, celebrated August 11, somewhat similar decorations were used. The front of the church was decorated with flowers. In the decorations there was much use of ropes of flowers from which various fruits and vegetables were suspended. The images of saints were placed in cloth-covered booths at the four corners of the atrium. On the following day, Monday, a group of little girls danced in the streets, dancing once in the office of the mayor about 11 o'clock. About noon a Mass was held, followed by a procession moving counterclockwise about the atrium and stopping before each

2:Carrasco E-4, 5 (1945)1952
[P. 18a] NU34 Tarasco NU34
-Pátzcuaro

241 years. Therefore, men who own land in only
311 one 'plain' plant only every other year. Conse-
621 quently, everyone tries to have land in at least two 'plains'."[47]

Similarly in Jarácuaro, the whole island is divided into two sections which are alternately cultivated.

West describes this system as general in the Sierra.[48]

[609] Given this system of cultivation, the resistance against selling land to outsiders is easily understandable as all farmers have to work in close agreement. Any outsider using his land in a different way would disrupt the whole system.

This question of disintegrative versus
K2 conservative tendencies within the villages
621 can also be discussed in relation to a sub-
438 sistence economy or a market economy. No
433 doubt, in proportion as production is for consumption within the village, the easier it is for the community to hold its own against disrupting influences; the more it is intended for a larger market, the more likely it is that outside influences will penetrate the life of the community.

439 The connection of any Tarascan village economy, whether agricultural or depending on crafts, to the national and world
433 markets is undisputed and has been set forth clearly.[49] Part of the agricultural products, practically all handicrafts, and a sizable amount of labor are sold out by producers, while most consumption goods are bought from outside, with the exception of part of the food (housing and clothing to a much lesser extent). However, production of food, mainly corn for the villagers' own consumption, is basic to the economy of the villages and their relation to the national economy. This fact determines their attitude toward land and corn.
423 Land is the most desired form of property
435 and the safest way of investing money, because of the security it will give as a source
[185] of corn. The ability to produce one's own corn is the supreme aspiration of every farmer.

433 An analysis of agricultural economics shows that farming on poor land in Cherán
241 (a prosperous farming town) and Tzintzuntzan is done at a loss; that is, production costs (equipment, taxes, labor, etc.) are greater than the value of the crop.[50] Owners of such lands could earn more by hiring out as laborers than by working their own fields.[51] This way of farming

47. Beals, 1946, 20.
48. West, 1948, 30.
49. Beals, 1946, 56-9; Foster, 1948, 145-6, 289-90.
50. Foster, 1948, 76-8, table 14; Beals, 1946, 65-6.
51. Foster, 1948, 78.

2:Carrasco E-4, 5 (1945)1952
[P.195] NU34 Tarasco NU34
Pátzcuaro

178 and in some towns hat making has sur-
463 rendered to factory competition.[60]

Paracho, on the other hand, shows the
322 opposite picture. Here the manufacture of
178 wooden objects (bowls, vases, candlesticks,
chocolate beaters, chessmen, toys, etc.) has
[534] greatly increased in importance. The town
[439] also manufactures guitars for Mexico City
and Guadalajara buyers.[61] Santa Fe pot-
[323] tery has recently been selling to Mexico
City and even United States curio shops.[62]

The declining crafts are among those
178 producing basic necessities, while the
463 growing ones are luxury crafts depending
in part on the tourist market.

Both the disappearance and growth of handicrafts disrupt the economic independence of the village, for they produce an increased dependence on the national market either in selling the developed manufactures or buying what formerly was produced locally. As in the land situation, however, the older order is preserved to a significant extent. Handicrafts for the local market are still the main economic activity of many villages: pottery, shawls, belts, agave fiber bags and sacks, hats, mats, baskets, metates, furniture still provide the livelihood of many Tarascans.[63]

No matter how important handicrafts
423 may be for the economy of a given village,
578 land tenure is the factor which has pro-
duced the conflicts during the revolution-
ary period. This holds true even for vil-
[438] lages predominantly devoted to handi-
crafts, like Tzintzuntzan (pottery) and
Jarácuaro (hat making).

The conflicts which arose within the villages during the Revolution will presently be discussed.

The Mexican Revolution and the Tarascans

175 After the peaceful Porfirio Díaz period
(1877-1911), characterized by the economic
668 development of the country, a period of
423 unrest began in 1910. Under the term 'Mex-
ican Revolution' are usually understood
both the armed conflict from approxi-
mately 1910 to 1920 and the various gov-
ernments and their policies from the be-
ginning of the struggle down to the pres-
ent time. The Mexican Revolution is thus
a very complex social transformation
which includes all aspects of Mexican life.
I shall discuss only those aspects of the
agrarian revolution and reforms which
concern Tarascan developments. The lit-

60. *Ibid.*, 66.
61. *Ibid.*, 67, 68.
62. *Ibid.*, 63.
63. *Ibid.*, 56-71.

324 stone work used as doorjambs, door corners, and bases for the pillars of verandas where these rest on the ground.

TILE AND BRICK

339 Tile and brick are little used. Some tile roofs are seen and tiles are sometimes laid over a shake roof when the latter is worn out. Both tile and [317] brick are made from clay occuring near the town. The dry clay is brought to town on burros. The manufacture is carried on in an old chapel, and firing is in a kiln, both located in the church compound. The quality is poor and the demand is small.

MISCELLANEOUS

353 Adobe-and-masonry walls are commonly finished on the inside and, less frequently, on the 439 outside, with a coat of sand and lime plaster. [338] This material is always imported. So, too, are the pigments used in whitewash or kalsomine finishes employed to decorate plastered walls.

TYPES OF
STRUCTURES

343

FIGURE 3.—Old "*troje*" in Cherán, said to have been built before the Revolution.

343 *la tarima*" (uanájɟukua). The foundation beams
335 are square, from a third to a fourth of a *vara* (about 8 to 10 inches) in cross section, but the crosspiece is thinner by the thickness of the floor boards.

The two longest foundation beams and the

354 The kitchen always has a hearth on the ground, usually made with six stones (parángua), arranged as in figure 15. Infrequently, the hearth or stove is of clay (fig. 16). Space is provided for three fire places, one (fig. 15, *b*) for the *comal* or tortilla baking dish, and two (*a*–*a*) for cooking pots. This hearth is usually at one side of the structure.

[373] Near the fire a branched stick (čuríŋgu) is set in the ground; on this stick pitch-pine splinters (k'uerámu) are burned for light at night. At the back of the kitchen are one or two shelves, 415 "*tinajera*," (plátu jatákua). On the upper are 352 the old ollas and large vessels. On the bottom are new ollas (pureči), plates (plátu), jars (iɬamatarakua), wooden spoons (ioɾésa), and knives (kučó). Below the shelves on the ground, are the three-legged metates (iauári), *molcajetes* (jiúmatakua), *comales* (eróksa), and large water jugs (k'amúkua), including one set on a fiber ring (uanɬari) containing drinking water. Also on the ground are baskets (ɬakiáta), tortilla baskets ("tascal," kuatása), and gourds (uɹáni). Either on the floor or on the shelf may be wooden bowls (batieča), other types of baskets (ɬakiáta kanímu and šúndi, "*chúndi*"), and fire fans (p'unítatarakua). All the manufactured articles are imported.

[439]

352 The metate, when in use, is placed on a plank beside the fire. At night, it is removed and mats [513] are spread out for sleeping.

[p. 22 b]

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P 40-9]

262
252 the above-named foods is the highly colored flour types grown in the house-lot gardens.

Pinole has the widest distribution and is possibly the most ancient of the maize foods in the New World. Among the Tarascans usually yellow maize from the *desmontes* is employed for pinole. The grain is toasted on the *comal*, then dry-ground on the metate, piloncillo being mixed in during the grinding process. *Pinole* is used almost exclusively for food on long trips. *Esquite* is prepared also by toasting whole grains of dried sweet or black *elote* corn on the *comal*, but it is not ground.

The preparation of tamales, pozole, atole, and tortillas among the Sierra Tarascans is discussed by Beals (1946, pp. 49–52). In preparing all four types, hard-shelled maize is first soaked and cooked in lime water to soften or remove the hard outer shell that covers each grain. (Beals mentions the use of oak ashes in soaking corn for pozole.) For tamales, atoles, and tortillas the soaked grains are wet-ground on the metate or in power-operated grinding mills (*molinos de nixtamal*). The fact that they form an essential part of fiesta and ritual foods of most Mexican Indians suggests that tamales and atoles may be more ancient than tortillas. The latter are commonplace in each of the two or three daily meals and carry no ritual significance. Moreover, the varieties of both tamales and atoles are numerous. Beals describes 10 atoles habitually made in Cherán; 11 kinds were noted in Sicuicho, only 5 of which were similar to those in Cherán. The varieties of atole are ordinarily distinguished by the addition of some flavoring, such as ground blackberries or herbs.

231 *Animal feed.*—Maize grain is commonly fed to livestock, notably for fattening hogs. Yellow corn, mainly Mountain Yellow, is considered the best for feed, as it has the highest oil content of all Tarascan corns; moreover, apparently the yellow color gene is associated with proper vitamin content for animal growth and fattening.[9]

● 439 *Sale of maize.*—The Tarascan Sierra is primarily a subsistence area in terms of maize, but when crops are good surplus grain is sold to buyers from Zamora, Tangancícuaro, Uruapan, and Zacapu. The surplus maize districts are

[9] According to Edgar Anderson (personal communication), in Jalisco the Yellow Mountain maize brought down from the highlands sells at a premium in the hog-raising districts south of Guadalajara.

439 located around the Sierra in areas favored by irrigation or rich soils, such as the upper escarpment in the South or the Zacapu Basin in the North. White field maize and yellow field maize comprise the bulk of the export crop. Ekuaru maize is entirely for home consumption and most of the mountain crop is used locally. Accurate statistics on crop production and export are not available for the Tarascan area; export data probably do not exist, since public records of sales are not kept in the villages.

244 **Bean culture.**—As an aboriginal cultigen the bean (*frijol*, t'aʧán) is second only to maize in Tarascan agriculture and food habits. Twenty varieties of the kidney bean (*Phaseolus vulgaris*) are cultivated in modern Tarasca. Although most of these are found in many parts of central Mexico,[68] a few may be peculiar to the Sierra of Michoacán. Among the latter are small cream- or brown-colored beans called *petrona* or uašári in some Sierra villages; another is called karáɣaɾi. The Indians regard such beans as "criollos," or natives to the local countryside, while other varieties, [177] which carry non-Tarascan names, are acknowledged to have been introduced from the outside. Many wild beans are reported to exist in the Sierra, though only one, called uipínju (probably *P. vulgaris*) was described in Pamatácuaro, where it is tolerated along edges of maize fields. It is gathered and eaten, but is little liked.[69]

Besides the kidney bean, the Tarascans cultivate the large-seeded *Phaseolus coccineus* L. (*P. multiflorus* Willd.), which they call kokóʧ (the ayocote or ayocotl of the Nahuatl-speaking people).[70] This bean is rarely grown or used by mestizos and even among the Indians its cultivation is dying out.[71] It is now grown only by the more conservative people, especially in the house-lot gardens where it is planted and tended by women. Kokóʧ, therefore, must be an old cultigen in the area. Having a sweet flavor, it is not as well liked as the newer kidney beans from the outside. In some of the Lake pueblos kokóʧ has

[68] The common central Mexican varieties are: Bayo Grande, Bayo Chico, Mexicano, Colorado, Color de Rosa (Rosa de Castilla), Encerrado, Prieto, Blanco, Huiguerilla, etc.

[69] Unfortunately, a seed specimen of this bean was unobtainable. Another doubtful wild *Phaseolus* is reported from Corupo; called *frijol cimarron*, it produces a white seed and an enlarged root stalk ("raíz como camote").

[70] The Spanish terms "*patole*" and "*frijole*" are also used in some localities. In Pamatácuaro *P. coccineus* is known as ʃepe.

[71] In many pueblos (Sierra and Lake regions) it was stated that kókoʧ was cultivated many years ago, but since the introduction of better flavored beans from mestizo towns, it was no longer grown.

245 *Castilla*), and the *granada de China*, and a great variety of native subtropical fruits such as the aguacate, chirimoya, guayaba, and zapote blanco. In the warmer sections of the *tierra templada* are found tropical fruits, the native mamey and zapote prieto, the Asiatic mango, Old World varieties of the banana, and the possibly native plantain.

245 177 797 The European fruits were brought into the Tarascan area early in the 16th century mainly by missionaries. Every mission, church, or convent had its small garden where the priest and Indian neophytes cared for fruit trees and vegetables. Consequently the new fruits spread rapidly among the Tarascan villages, and were soon fully accepted into the native economy. Both the Relaciones geográficas (Mus. Nac., leg. 102) and the Ponce Relación indicate the widespread cultivation of European fruits in the Tarascan area during the latter part of the 16th century. With fruit [242] cultivation the missionaries probably introduced the technique of grafting, e. g., the insertion of apple and pear cuttings into native *tejocote* to insure a hardy root system adapted to local soils and climate. Grafting is still practiced in most Tarascan villages.

245 Arboriculture among modern Tarascans consists of little more than a few fruit trees planted in the ekuáru or along hedgerows. Most trees are only semicultivated. Except for initial grafting [242] of apples and pears and the planting of shoots of other fruits, little care is taken of trees. Systematic pruning is not practiced, nor is any attempt made to control disease or insect pests.

245 438 Although in most pueblos fruit is grown chiefly for local consumption, the people of some towns specialize in raising certain fruits for export. The Sierra communities of Cumachuén and Pichátaro are the apple producers;[96] Cherán, Parangaricutiro (prior to the volcano), Tancítaro, and the *rancho* of Tenguecho specialize in pears.[97] In these towns the entire ekuáru of some households may be devoted to fruit trees, forming a small

[439]

[96] Many varieties of apples are marketed in these towns. The most popular is termed *ermuasa*, a reddish fruit picked in August and September. Others, *chata*, *mariana*, *chata de Serine* (a small crab apple), are harvested in October. In addition, the small red *mariana* is grown in Pichátaro. Apples from Cumachuén and Pichátaro are carried by *arrieros* into the *tierra caliente* as far as Petatlán on the Pacific coast of Guerrero. They are also taken to the large markets of the plateau: Zamora, Pátzcuaro, Zacapu.

[97] In 1789 pears formed one of the main industries of Capacuaro, but are now relatively unimportant (AGN Historia, vol. 72, f. 330). See Beals, 1946, pp. 27-28, for description of pear picking.

245 orchard. In such cases trees are closely spaced
438 and present an unkept appearance.

Many Tarascan pueblos in the lower and warmer areas bordering the Sierra specialize in subtropical fruits, and possibly served prehistorically as fruit supply centers for the Sierra towns. Since the development of modern transportation their produce is taken to many parts of Mexico. San Angel Zurumucapio is the avocado center of the Tarascan *tierra templada*,[98] Tingambato the chirimoya town, and the former Tarascan pueblos, Ziricuritiro and Acahuato, produce bananas, mangoes, mamey, citrus, etc. Tarascan Atapan and mestizo Tingüindín supply the western part of the Sierra with citrus, guayaba, and mangoes. As early as 1581 Atapan had become a citrus-growing center, and probably before the Conquest had produced avocados and chirimoyas for Sierra trade. The La Cañada towns have ever been the northern Tarascan fruit center. Today avocados form the main fruit speciality of Acachuén, Ichán-Tacuro, and Carapan; oranges are the chief export of Tanaquillo.[99] With the possible exception of Ihuatzio, which produces large quantities of avocado, there is no specialized fruit town in the Lake area, although the aggregate subtropical fruit production there is of importance in Sierra trade.

262 Fruits from the *tierra caliente* have long had a special significance among the Sierra Tarascans. Today at least two tropical fruits are eaten especially at religious fiestas, and special effort is made to obtain them for such occasions. Coconuts (kóko) in some Sierra pueblos are rarely eaten except during the Ramos and Easter holidays.
●[439] Formerly in Charapan 2 weeks before Easter a group composed of 15 men and boys from each barrio traveled down to the Tepalcatepec Basin to fetch coconuts for eating and coconut blossoms
[389] for church decorations. The band was ceremoniously seen off with the firing of rockets.[100] Likewise, the large plantain (*plátano macho*) is eaten

[98] The large avocado trees in the house lots of Zurumucapio completely hide the town. Two types of the fruit are grown, the black and white-skin varieties. Both are irrigated, and the fruit is harvested in April and May. Frequently coffee plants are grown under the shade of the avocado.

[99] Other fruits produced in La Cañada: Limes, guayaba, chirimoyas, figs, apricots, jusquiniquiles (Iurén), plums, mangoes, pomegranates, peaches, apples, zapote blanco, capulín, a few bananas.

[100] This custom has practically disappeared in the Sierra. Most coconuts and other tropical fruit are now obtained at the Ramos (Palm Sunday) fairs at Peribán, Zamora, Uruapan, and Pátzcuaro. In the Lake area during Easter festivities churches are often decorated with makoa (*sendia*) from the Balsas.

raw (when aged or *pasado*) or, more recently, cooked on Easter, and sometimes on the village saint's day are distributed to all inhabitants at the end of the fiesta.[101] Moreover, cacao beans were formerly an important trade article imported into the upland pueblos. In most households in the Sierra the beans were roasted on the *comal* and then wet-ground on the metate. Mixed with piloncillo and cinnamon, the chocolate "dough" was made into small disks (2 in. diameter), called k'ékua. A chocolate drink is made by dissolving the k'ékua in hot water. A few storekeepers still make disks from ground chocolate purchased from mestizo wholesalers. Today chocolate is taken principally on fiesta days, and is often served to visiting strangers. Other tropical fruits, such as the common banana, mango, pineapple, mamey, chicozapote, zapote prieto, etc., are brought into the Sierra in season. They are eaten at all times and appear to have no ceremonial significance. Pineapple is used for a fermented beverage, *tepache*.

Specialized truck gardening.—This is a more recent type of horticulture among the Tarascans. They have adopted intensive commercial production of vegetables in only a few well-watered spots near large mestizo markets. The most notable truck gardening district has developed on the narrow stretches of lacustrine soil along the shores of Lake Pátzcuaro, where irrigation is practiced. Although water is carried in buckets to some of the smaller gardens (e. g., in Puácuaro), most of the vegetable plots are irrigated with the t'apáratarákua, or *pala*, possibly a pre-Columbian invention.[102] This instrument consists of a wooden spoonlike container fastened to a long pine pole, which, resting on a crosspiece, is used like a lever to scoop water from ditches or wells (fig. 4; pl. 7). Along the wide western shore of Pátzcuaro shallow ditch wells are dug down to the water level (5 to 6 ft. from the surface), from which water is scooped and distributed to vegetable plots by a system of small canals. Along the narrow shores of the Tarıu-k'éri Peninsula (where the water table is low) small canals have been constructed to permit lake water to flow into a ditch well, from which the water is lifted with the *pala* to high levels. In

[101] The latter custom was reported from Charapan and Patamban.

[102] The provenience of the *t'apáratarákua* is not clear. Its mention has not been encountered in colonial documents; the Relación de Michoacán (p. 23), however, speaks of irrigated maize, presumably around Lake Pátzcuaro. Today the *t'apáratarákua* is used also at Tarejero, in the basin of Zacapu.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
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244 addition to the gardens of Lake Pátzcuaro,
312 commercial truck farming is also carried on in La Cañada and in Atapan, but on a smaller scale. There, fields are irrigated by diverting water from streams, a technique probably learned from Europeans.[103]

244 The native chile, *jitomate* (tom-kuaraki), *tomate*, and green beans (*ejotes*) and the Old World onion, garlic, cabbage, and lettuce are the principal products of the commercial gardens. Chile is the most significant of these, in terms of both acreage and market value. The fruit of this plant, a vitamin-rich gastrin, has always been important in the aboriginal diet. Two species of *Capsicum* are cultivated: *C. annuum*, the common herbaceous annual, and *C. fructescens*, the perennial shrub (*chile de árbol*). The latter is cultivated mainly in the house gardens. Both species re-
244 quire a long growing season and abundant water;
438 consequently chile cultivation is absent from the Sierra, but is found in the surrounding well-watered areas. Chile, therefore, has ever been a
● [439] trade article between the Sierra and its borderlands.[104] Tarascan Puácuaro, Uricho, Arúcutin, and mestizo Tócuaro and Erongarícuaro are the main chile producers of the Lake. Most of the La Cañada pueblos raise some chile for export into the Sierra, but Etúcuaro, outside the valley, is the largest producer of that general district. All these areas raise *chile verde*, rather than the *chile seco* of the *tierra caliente* and Lake Cuitzeo district.[105] In both the Lake Pátzcuaro and La Cañada areas chile and tomatoes are first planted in the *almáciga*, or hotbed, in December.[106] Replanting in the gardens is done in March, and the vegetables are harvested from June through September.

STOCK RAISING AND ANIMAL PRODUCTS

231 Modern Tarascans raise most of the European animal domesticates. Most households own a team of oxen for plowing and one or two burros for hauling wood and carrying produce to market.

[Text continues Top of P. 49a-Mel 39]

[103] In several formerly Tarascan towns in the northern plateau area vegetables are cultivated on a commercial scale. The truck farming around Zirícuaro, southeast of Lake Cuitzeo, was significant during the latter part of the 18th century. Tarascan horticulturists of this pueblo carried vegetable produce as far as the Toluca market (AGN Historia, vol. 73, f. 265).

[104] The Tarascan name for Chilchota is *tirápu*, which means green chile. The Sierra people have always thought of La Cañada as a producer of chile, as well as other vegetables and fruits.

[105] The chief varieties of *C. annuum* in the Lake district are *humirillo* (*verde*), *amarillo*, and *relleno* (*bell chile*). *Chile seco* from the *tierra caliente* reaches the Sierra through the markets at Uruapan, Pátzcuaro, and Los Reyes.

[106] The *almáciga* is likely a European introduction, although it was pre-Columbian in the *chinampa* district in the Valley of Mexico.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 55-d] Pátzcuaro Sierra

226 another without permission from the authorities of the latter.

252 **Fish preparation.**—*Pescado blanco*, *trucha*, and akúmaia are usually taken to market fresh, although the latter is sometimes fried on the *comal* before being sold. The tiny k'uerépu and č'arári, however, are invariably sun-dried, the catch being spread on a petate, which is placed near the door of the dwelling where it can be easily watched [439] (pl. 11). Since pre-Conquest days dried č'arári has been one of the main exports of the Tarascan lakes. It was distributed into the *tierra caliente*, the Sierra, and as far east as Toluca.

LUMBERING ACTIVITIES

313 The Tarascans, possibly more than any other aboriginal group of Mexico, have been exploiters of forest products since pre-Columbian times. During the Empire period one of the important officials of the *caltzontzin* at Tzintzuntzan was in charge of "the keepers of the forests," who cut beams and made planks for public, and probably private, use.[136] Not only were large beams and logs used in the construction of temples, but also in the building of forts against Aztec raids. During the colonial period the pine forests on the northern flanks of the Sierra de Ozumatlán were heavily exploited by Tarascan woodmen for beams, planks, and shakes for the Guanajauto and Zacatecas mining districts.[137]

Much of the timber resource of northern Michoacán was depleted by the end of the 18th century. Relatively untouched by colonial exploitation, the pine and fir forests of the Sierra de los Tarascos, although constantly diminishing, have remained the principal source of timber for the indigenous population. There are few contemporary Sierra Tarascan men who cannot handle an ax or lumber saw. When the maize fields do not demand their attention, the family head and his sons are usually in the forest cutting timber or gathering resin. The Sierra Indian is consequently both a farmer and a lumberjack. Some are professional woodsmen, who live in the village but seldom engage in agriculture. Little lumber-

[136] Relacion de Michoacán, p. 17: ". . . *diputado sobre los que guardaban los montes que tenian cargo de cortar vigas y hacer tablas y otra madera de los montes . . .*"

[137] This exploitation began immediately after the Guanajuato mines were opened ca. 1554, and extended into the post-colonial period. After the exhaustion of the local wood supply, Zacatecas began to draw on the northern Michoacán lumber reserves during the first part of the 17th century (Bancroft, 1886, vol. 1, p. 315).

4: West K-5 (1946) 1948 NU34 Tarasco NU34
[P. 556] Sierra

313 ing is carried on outside the Sierra. Some beams and planks are cut by the people of Zipiajo and Teremendo, who have large tracts of forest on the slopes of El Zirate, and some farmers of the Lake area and La Cañada cut small amounts of lumber for home use.

313 423 Beals' discussion (1946, pp. 15–19) of legal cutting rights, lumber products, and lumber tools for Cherán can be applied to most of the present Sierra pueblos; therefore, only a summary will be given here. As mentioned above, all Sierra pueblos possess varying amounts of forest land held as common property. Since the late 313 [656] 1930's the Federal Government has attempted to control exploitation by placing all large forest areas under national domain, by encouraging the organization of local lumbering cooperatives, and by periodically inspecting lumbering activities. [657] In most pueblos the Federal tax on lumber products is passed on to the individual woodsmen, who pay the town council a given amount for cutting rights. In other towns lumber coopera- [474] tives have been formed to pay the tax, each member contributing dues and having sole cutting rights in the village forest lands.

Although much lumber is for local use (house [439] construction, fences, acqueducts, watering troughs, shakes, etc.), most is cut for the outside market. Raw logs, beams (*vigas*), planks (*vigetas*, *tablas*), and railroad ties of pine and fir are cut and pre- [493] pared for lumber contractors, whose heavy trucks visit the larger villages during the dry season to [492] haul the products to the nearest railhead. Wood- cutters of the remote pueblos drag beams and planks to market with the aid of burros and mules. [497] Los Reyes, Tingüindín, Tangamandapio, and Zamora handle the forest products from the western part of the Sierra, while Uruapan, Zacapu, Ajuno Station, and Pátzcuaro serve as lumber points for the eastern section. Formerly a signifi- cant forest industry, shake making (performed by skilled specialists) is slowly declining because of the increasing use of tile roofing.[138] Turpentine 314 is no longer distilled locally. (See Beals, 1946, p. 18, for illustration of Tarascan still.) Rather, the resin (*resina*) is gathered in 5-gallon tins and taken to the village, where they are periodically

[138] Although in some pueblos (Paracho, Cherán, Angahuan, Capacuaro) shakes are still made for export to Uruapan, most are used locally. During colonial times and even in the last century large quantities of shakes were shipped from the Sierra to the northern mines, where they were the principal roofing material.

923 438 The manufacture of these two Tarascan pots is slowly dying. In 1946 only 10 women were making pottery in Cocucho, whereas in 1841 it was made in practically every household of the village (AAM, siglo XIX, leg. 707).

Today by far the greater amount of Tarascan pottery is made with molds by both men and women.[137] None is manufactured with the potter's wheel. All who use molds have taken [177] over the European glaze technique and the firing oven. Tarascan mold-made pottery can be differentiated according to finish. The "Patamban" type, for instance, carries a beautiful green glaze, known and admired over most of western Mexico.[138] Green glaze is also used in Santo Tomás and Santa Fé de la Laguna, having been recently introduced into the latter pueblo. Pottery hand-painted with brilliant floral designs on a background of black glaze is a specialty of Santa Fé de la Laguna. This unusual technique was [177] introduced around 1900, and was readily adopted by the inhabitants, whose former industry was batea painting. As mentioned previously, the inhabitants of Santa Fé de la Laguna began to make pots during the last quarter of the 19th century. Since then their ware has become [439] known throughout Mexico, and some is imported by United States curio shops. In 1936 the technique spread to Tiríndaro, when daughters of a Santa Fé potter married into Tiríndaro families. The most common modern household pottery is the Red ware, either glazed or polished, made in Tzintzuntzan, Huánsito, San José, and Patamban. Before being fired the large pieces, such as ollas and *cántaros*, are usually slipped with a red clay solution and then burnished with iron pyrites. A handsomely polished surface, similar to that of the pre-Conquest wares, results after firing. (Such ware is fired only once.) Smaller pieces are often glazed with litharge. Glazed pieces are fired twice, the litharge being applied after the first firing and the glazed surface appearing after the second. Designs are often painted in white (*tierra blanca*) and black (*tierra* [439] *de hormigón*). Red ware is carried as far as Guadal-

[137] See Foster (1948) for a detailed description of the mold technique used by the potters of Tzintzuntzan.

[138] To produce the green color, pulverized copper oxide (*cobre quemado*) and yellow flinty quartz (*pedernal*) are added to the lead oxide (litharge) solution, which is applied to the pottery before firing. A black glaze is also made by adding a mineral called *tierra de hormigón* and pedernal to the litharge.

4: West K-5 (1946) 1948 NU34 Tarasco NU34
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438
323 ajara, Morelia, the *tierra caliente* of Guerrero, and
[439] Mexico City.

Another type of ceramic industry is represented by the clay toy figurines made by the women of Ocumicho in their spare time. The hollow figures are formed with molds in shapes of diminutive horses, sheep, oxen, and men, each with an opening which serves as a whistle. After firing, they are painted and varnished. Owing to complete lack of water near the town in the dry season, this activity is carried on only during the rains. Ocumicho figurines are seen in markets in many parts of western Mexico and the *tierra caliente* of Guerrero and Michoacán.

Red clay tiles, which are slowly replacing shakes in the Tarascan area, are made in some pueblos within the clay belt on the margins of the Sierra. Tanaco is the sole town within the Sierra proper to make this product. In Nahuatzen the
[177] technique of making flat concrete tiles was introduced in 1944. Such tiles are replacing the less durable clay ones in some mestizo towns.

TEXTILES

286 In 35 modern Tarascan villages spinning and weaving of cotton, wool, or agave fiber are carried on as cottage industries. Both indigenous
[177] and European techniques are employed, neither having changed since the 16th century. Since the beginning of the present century, however, factory-made textiles from large Mexican towns have begun to displace some home-woven articles, but indigenous conservatism still supports the native handicraft.

293 **Spinning.**—Formerly Tarascan weavers spun raw cotton from the *tierra caliente*, but at present commercial cotton thread, purchased in mestizo markets, is prepared for weaving by twisting five to six strands on the spinning wheel. Today only raw wool and agave fiber are homespun, the latter with the native *malacate* (uipínu), or hand spindle with round clay wheel, the former with the 16th century spinning wheel (*torno*). (See Beals, 1946, p. 36, for illustration of spinning wheel.)
[286] Both cotton thread and spun wool are usually colored locally with aniline dyes purchased in mestizo markets.

286 **Weaving.**—Tarascans weave all agave and cotton fabrics on the native belt loom (patákua (Paracho); jopáratakua (Charapan, Tarecuato)), a horizontal loom which has a backstrap and is

286 found in most parts of indigenous America south of the United States (pl. 11). Customarily, only women operate this loom; however, in Tarecuato agave fiber is woven with it by both men and women, and in Tanaco, exclusively by men. Until the 1880's the most important fabric made with the belt loom was the cotton *manta*, a simple white cloth used for native clothing since pre-Conquest days. The cheap factory-made cottons [177] of Puebla and Veracruz have completely displaced the indigenous *manta*, so that today Tarascans weave women's and men's belts (*fajas*), shawls (*rebozos*), aprons (*delanteras*), tablecloths and napkins (*servilletas*). Widths of cloth ranging from 1½ inches (women's belts) to more than a yard (*rebozos*) can be woven on these looms. Designs are usually woven into the above-named articles, the warp threads being first arranged for large widths on a long stick (šekuárakua) and for the narrow *fajas* on the šekuáni, an arrangement of four to five small sticks placed in the ground. Some of the finest examples of cotton weaving are found in the Sierra pueblos: Paracho (whose women make the Tarascan *"rebozo corriente"*), Ahuíran (women's belts), Aŋgahuan (women's belts, aprons, *rebozos*), Charapan (belts, aprons, tablecloths), San Lorenzo (tablecloths, belts).

In the early colonial period the weaving of agave fiber was apparently widespread in the Sierra (AGN Congregaciones, f. 14), but today it is limited to Tarecuato and Tanaco.[139] In these villages the main agave fiber products are *morrales* (square bag with shoulder straps), *ayates* (coarse piece for wrapping articles to be carried on back), and *costales* (coarsely woven sacks for carrying goods on mules and burros). The fiber of *maguey bruto* 283 (akámba t'arímiti) is used for the finely woven morrales, while that of *maguey del toro* (torakámba) is employed for the coarser *ayates* and *costales*. Leaves of the agave plant are cut and the fiber extracted and carded. After drying, it is spun by (1) rolling fibers on the thigh with the hand, or [286] (2) with the malacate. The fibers are woven on the belt loom in the same fashion as cotton[140] (pl. 11). A piece of the agave fabric is doubled over and sewn on the sides to make the morral, and a shoulder cord is added. Other agave fiber [439] products made in Tarecuato include rope and

[139] Agave fiber products were manufactured in Pichátaro during the last century (AAM, siglo XIX, leg. 707).

[140] The loom for weaving agave fiber is called nápatakua in Tarecuato.

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283
439 cord; these and the woven articles are marketed in Guanajuato, Jalisco, the *tierra caliente*, and in all parts of the present Tarascan area.

286 Woolen products are woven mainly on the
[177] European loom, which was introduced early in the 16th century.[141] During most of the colonial period this loom was used principally in the *obrajes*, or cloth mills established by Spaniards in various parts of Mexico near an abundant supply of wool. Indians first learned European weaving techniques in these mills, the labor for which came from surrounding native pueblos. By 1540 an *obraje*, operated by 26 forced native workers, had been set up in Acámbaro (Paso y Troncoso, 1905, vol. 1, p. 33), and before the close of the century woolen mills existed in Taximaroa and Valladolid (Zavala and Castello, 1939–46, vol. 6, p. 225). Moreover, Indians quickly learned to spin wool, for tributes of spun wool were exacted from some pueblos, possibly to supply *obrajes* nearby.[142] It is not clear when the Tarascans began to use the hand loom in their own villages; possibly some looms were set up in the northern towns in the 16th century.[143] A report of 1789 (AGN Historia, vol. 73) on the Tarascan pueblos of Lake Pátzcuaro and the Sierra, however, mentions the use only of the native loom. The first indication of a native wool industry in the Tarascan area comes from the Martínez de Lejarza report of 1822, which cites the *obrajeros* of San Juan Parangaricutiro (later the most renowned of the Tarascan blanket-weaving towns) and of several northern mestizo towns.[144] Tarascan wool weaving on a commercial scale may be post-colonial, having little economic basis until the break-down of the large woolen mills at the close of the colonial period. Today woolen blankets
[438] (*cobijas*, *serapes*) are made on the European hand loom in 24 Tarascan towns, Nahuatzen and pre-volcano Parangaricutiro being the largest pro-
ducers.

[141] Strands of wool are sometimes mixed with cotton in making women's belts. Often the warp is of woolen strands, the woof of cotton thread.

[142] For example, ca. 1540 the people of Purúándiro (Michoacán) contributed each week two arrobas of spun wool (Paso y Troncoso, 1905, vol. 1, p. 117).

[143] The Relación de Chilchota (Mus. Nac.) states that some natives in the town made clothes of wool, but the type of loom used is not given. Moreover, according to the Relación de Cuitzeo (Mus. Nac.), the Indians living around the lake "... *traden lana a las commarcanas para hacer ropa para sentirse, y esa mesmas la hazañan* ..." Again, the type of loom used to weave wool is not given.

[144] The northern towns mentioned: Morelia, Zinapécuaro, Zitácuaro, Taximaroa, Jiquilpan, Huaracháta, La Piedad, Huaniqueo, and Tangamandapio. At that time the latter pueblo was wholly Tarascan; according to Martínez de Lejárza (1824, p. 227), "... *sus habitantes trabajan telares de algodón y lana.*"

286 ducers. In many towns only three of four *obrajeros* operate full time and produce mainly for local consumption. Raw wool is purchased locally, is washed, carded, dried, and spun by the *obrajero*. In addition to manufacturing blankets,
[438] some weavers in Nahuatzen, Charapan, and Tanaco make woolen cloth for the traditional black skirt, which is still worn by most Tarascan women. Such skirts, however, are being made increasingly from factory-woven woolens purchased in mestizo towns.

531 **Embroidery and sewing.**—In the Sierra villages
438 of San Lorenzo, Tarecuato, Angahuan, Ahuíran, Cuanajo, Nahuatzen, and Charapan some women specialize in cross-stitching and embroidering designs on blouses (*huipiles*), napkins, and tablecloths. Many of these articles are for tourist trade in Uruapan, Zamora, and Pátzcuaro.
286 During the colonial period and the first half of the 19th century, the men and women of Ahuíran and Pomacuarán knitted men's stockings of cotton thread, using otate needles (AGN Historia, vol. 73, f. 344; Martínez de Lejarza, 1824, pp. 179–180).
[439] Ahuíran stockings were sold to mestizos and Spaniards over a wide area, but this trade declined after the change in styles of men's clothing in the early 1800's.

294 **Hat making.**—Among the Tarascans this indus-
[177] try was introduced probably in early colonial days.[145] However, the first mention of the industry comes from the report of 1789, which cites it in Nurío (AGN Historia, vol. 73, f. 348). There, hats were made of wool, likely by a felting process, but the industry had disappeared by the end of the last century. None of the colonial sources mentions the manufacture of straw hats in Tarascan towns. Old men from Pichátaro remember hat making during their childhood, which fact at least dates the industry in the last half of the 19th century. (Palm-leaf hats were made in Morelia at the end of the colonial period, according to Martínez de Lejarza, 1824, p. 29.)
294 Today hats (principally of palm leaf, some of
438 wheat straw) are made in seven Tarascan towns, Jarácuaro Island being the main center.[146] Palm leaf brought up from the *tierra caliente* is cut in thin sections, which are braided into strips, called

[145] According to tradition, hat making was one of the many industries which Don Vasco de Quiroga taught the natives. (Leon, 1904, p. 63.)

[146] At least one member (and often three or four) of every family on Jarácuaro Island makes hats. Having little tillable land, this pueblo is one of the most specialized home-industry towns in the Tarascan area.

285 438 the Lake area a twilled technique is used in mat making, which is performed on the ground, the only tools being a knife or sharp stone to cut tule stalks and a wooden mallet to flatten the reeds as they are twilled. Several sizes of mats are made; the largest, called simply k'uírakua-k'éri, measures 1.5 by 1 m.[148] Both mats and fire fans are taken to the Lake markets (Pátzcuaro, Erongarícuaro, Quiroga), where they are purchased by the Sierra people and buyers from the *tierra caliente*.

Basketry.—Ihuatzio and San Jerónimo in the Lake area are the only modern Tarascan towns in which baskets are made. The former Tarascan towns of Tangamandapio (west of Zamora) and Panindícuaro (north of Zacapu) are the main basket centers in the general area, supplying the Sierra people with the šúndiča, or harvest baskets for maize. The Ihuatzio baskets are made of split carrizo stalks, which grow in abundance in local house lots. Both wicker and twilling techniques are used (pl. 12).

286 438 **Netting.**—In all fishing villages around Lake Pátzcuaro nets are made by men, women, and children in their spare time. On Janitzio and the Urandén Islands a few professional *rederos* fabricate nets to sell to fishers in other pueblos. Cotton [283] thread purchased in Pátzcuaro is wound on the *hilador* (šoróranskua) and five to six strands are twisted with the native malacate or with the European spinning wheel. The twisted strands are water-soaked and sun-dried. Nets are made with the čurúkua, a large wooden needle (20 cm. long, 2 cm. wide).

294 [171] **Capote making.**—In many parts of indigenous Mexico the palm-leaf raincape (*capote*), similar to those worn in the Orient, is a common outdoor apparel during the wet season. *Capotes* are made [438] by women in three Tarascan towns—Quinceo, Arantepacua, and Turicuaro—using leaves of the *palma pimu* (*Acoelorraphe pimo*), which are im- ●[439] ported from the *tierra caliente* below Ario de Rosales.[150] The capes are fabricated by tying soaked strips of palm leaf onto braided cords, two of which are stretched parallel and one foot apart on pegs driven into the ground. The strips of

[TEXT CONTINUES TOP OF P. 67a]

[148] Other types: The k'amérika (1.3 m.×80 cm.) and the jimánitepémeta (1 m.×80 cm.), both used for sleeping; the jatápetakua, a small knee mat; iástiran, a long, narrow mat said to mention as a sort of rug. Many more sizes and varieties occur, the names and types varying from place to place. The terms and types given above were observed in Ihuatzio and some of the ranchos along the shore of the Tzúo-k'éri Peninsula.

[150] Most of the palm leaves used in Arantepacua are said to come from the localities of Rosario, La Playa, Charapendo, and San Marcos, south of Ario.

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palm are tied on one cord, half-hitched to the second one, and then tied back to the first; the loose end of the strip is permitted to hang over the second cord, thus forming a drainage surface similar to thatch (pl. 12). The process is repeated, adding a new row of tied strips to the previous one until the garment (4 ft. long and 3 ft. wide) is completed. Arantepacua *capotes* are marketed as far north as Guanajuato. No mention is made of these raincapes in the colonial sources, nor is there a Tarascan word for the garment. It is not improbable that the *capote* is an introduced trait.

Broommaking.—This is another minor industry now practiced by a few men in Arantepacua. Pimu palm leaves are symmetrically arranged around the end of a finished pine stick and then tied with agave fiber or a braided strip of palm. The result is a common broom found in all parts of central Mexico.

WOODCRAFT

According to the early Spanish chroniclers, the Tarascans were clever craftsmen in wood, and under the instruction of Spanish masters the natives became among the best carpenters in New Spain (La Rea, 1945, p. 20; Escobar, 1924, p. 147). By 1580 Indian carpenters in at least four towns—Pátzcuaro, Necotlán (Undameo), Tiripitío, and Tingüindín—were turning out European-styled tables, chairs, and writing desks, which found ready sale among Spanish colonists in all parts of Michoacán.[180a] At that time lathework was established in Pátzcuaro, and probably before 1540 Tarascans had begun to carve saddle frames for Spanish horsemen (Molotinía, 1903, p. 183). Like other Tarascan industries, woodwork was probably a rudimentary pre-Conquest craft greatly modified and improved by European techniques. However, the present commercial types of Tarascan woodwork—cabinet work, lathe work, and adz work—all appear to have been developed in the 16th century.

Specialized woodwork (apart from lumbering and shake making) was formerly more widespread among Tarascans than at present. At the end of the 18th century wood objects were manufactured in 21 pueblos (AGN Historia, vol. 73), today in only 13 towns. In but eight of the latter is the

[180a] Rel. de Pátzcuaro, 1581 (Martínez, 1940, p. 47); Mus. Nac., leg. 102: Rel. de Chocandirán, Rel. de Necotlán; Rel. de Tiripitío, ms. (in Garcia Library, Univ. of Texas).

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322 ticing and tenoning, housing, and dovetailing. Some pieces are joined with wooden pegs; metallic nails and screws are never employed.

322 534 [439] **Musical instruments.**—The most sophisticated of Tarascan woodwork is the manufacture of stringed instruments in Paracho. This pueblo has been the guitar town of Mexico since colonial times. In 1940 Paracho claimed 49 guitar makers and three individuals who made violins (including base viols). The art has spread to neighboring Ahuíran, where three men made violins in 1946. Local woods—*firímu*, *aile*, and *palo blanco*—are used for the top and base of the guitars; for sides and handles and inlaid designs walnut and cedar are imported from Mexico. Some *guitarreros* utilize local pine and fir for the tops of violins and base viols. The wood is cut with a small saw and planed to desired thinness. The top and base are cut from a pattern; the side bands are soaked and bent into place, being glued to the top and bottom pieces and held in place with braces. Strings and metal parts are assembled, and the instrument is varnished and waxed, ready for the ultimate consumer. Most *guitarreros* work on a [439] contract basis for Mexico City or Guadalajara buyers, and many Tarascans have moved their trade to the larger towns, mainly Mexico City, where their products bring higher prices.

The age of the Paracho guitar work is not known.

[Text continues top of P. 69a--Analyst]

325 old smiths, who work at their trade only part time, represented the remnant of a once thriving home industry.

[439] The former source of metal for the San Felipe smiths is problematical. According to a local informant, during the 1880's "*planchas de hierro*" were brought in from Cotija, a muleteer and trade center having close connections with the *tierra caliente* and the Sierra of Guerrero. This information points to Coalcomán in the Sierra Madre del Sur of Guerrero as the principal source of iron. Other ironworking towns of Michoacán include Irimbo and Nahuatzen. Mestizos in the latter pueblo fashion knives and machetes.

STONECUTTING

324 Stonework among modern Tarascans is limited to approximately 12 metate makers in Turícuaro.
[438] Formerly this village was noted throughout Michoacán for the high-quality *metates* (iauáni), *manos* (poɹékua), and *molcajetes* (šúmatakua) carved from a fine-grained andesite (ɬakápu amákiti, or "good stone"), found near the summit of the composite volcano Kanákuaráni (Cerro de la Corona) nearby. Since the introduction (ca.
[256] 1925) of the engine-powered nixtamal mills in mestizo and larger indigenous towns, demand for new *metates* has sharply declined.[161]

Metates and *molcajetes* are roughly shaped at the quarry on Kanákuaráni and are carried down to the pueblo on burro for finishing in the stonecutter's house. Stone is worked with steel tools,
[412] e. g. the pick (píkua) and sledge hammer (píkua-k'éri), and is finished with a polishing stone (janámu). Several sizes of *metates* are made and sold to traveling merchants who pass through the town.

TRADE AND TRANSPORT

438 The structure of trade among the Tarascans is
441 not dissimilar to that of most Indian groups of central Mexico. Although every settlement has at least one store where general merchandise can be purchased, most trading is done at the *tianguis*, or market, held regularly in the larger towns. Throughout the area professional traders—*huacaleros* (who carry merchandise on their backs), *arrieros* (who haul products on the backs of burros), and lately, wholesale buyers from the

[161] According to local informants, in 1912 practically every family in the village made metates. Since that time most of the villagers have turned to woodwork (mainly bateas).

444 which handles mainly staple food imports (salted dried beef, dried fish, salt, piloncillo, lard, beans, and wheat flour) and beverages (soft drinks, beer, and hard liquors). A small assortment of canned goods can be purchased in the stores of the larger towns. Often other items, such as cigarettes, kerosene, and metal household ware, are carried. In the small villages stores are customarily operated by well-to-do Tarascan families, often by the wife and children, while the man farms.[187] In the large pueblos the storekeepers are usually mestizos who have moved in from neighboring towns.[188] [877] Significantly, the infiltration of Spanish-speaking storekeepers into indigenous towns often represents one of the initial steps toward hispanicization of the native population.[189]

443 **The professional traders.**—The *huacalero* (inspikuiiri, or "one who trades") represents the last vestige of the ancient Indian carriers (*tamemes*), formerly important agents of distribution throughout Mexico. Few such traveling merchants, each of whom carries his wares in a wooden crate (*huacal*, kópaiakua) tied to his back, remain; the majority have been displaced by burro and motor transportation. As late as 1900 large 443 numbers of Tarascan *huacaleros* from many ● 439 Sierra villages carried handicrafts into the Balsas Basin, the coast of Guerrero, and Colima and returned with tropical fruit, salt, and cheese. Today about 15 *huacaleros* operate out of Pamatácuaro, carrying locally made wooden spoons and *bateas*, Patamban pottery, *morrales* from

[438] [443] made goods from Zamora, Guadalajara, Morelia, and Mérida. Regional handicrafts were represented as follows:

Article:	Origin	*Vendors* (number)
Blankets	Charapan	10 walking vendors.
Blankets	Jiquilpan	1 stall.
Reboscs	Paracho	1 stall.
Women's belts	Nahuatzen	1 stall.
Straw hats	Apo	1 stall.
Agave rope	Tarecuato	2 stalls.
Pottery	Patamban	12 stalls.
Pottery	Santa Fé	1 stall.
Pottery	San Juan Tlaquepaque (Jalisco).	1 stall.
Wooden tops	Paracho	1 stall.
Wicker baskets	Tangamandapio	1 stall.
Rusaraches	Los Reyes	3 stalls.
Rusaraches	Peribán	1 stall.

[187] Cherán, as Beals points out (1946, p. 79), is unique in that, although it is the largest Tarascan town, the storekeepers are Tarascan.

[188] For example, although Tarecuato is almost wholly native in speech, its three or four stores are operated by mestizos. Merchants of Paracho, Patamban, and Nahuatzen are all mestizos.

[189] Apart from its distributive function, the village store (mestizo or indigenous) frequently serves as the only readily accessible public place where a stranger may introduce himself and ask questions about the town. Except in the municipal seats, the town officials, all of whom hold nonremunerative posts, are rarely found in the *oficina*, or town hall

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443 Tarecuato, and medicinal herbs of the Sierra to
439 Colima, most parts of Jalisco, the *tierra caliente* of Michoacán and Guerrero. Tropical fruits make up most of the return load. A few professional carriers haul pottery from Santa Fé to Quiroga and, at times, to Morelia. *Huacaleros* from other towns have practically disappeared.

443 Although they do not use the large *huacal*, many women of the Sierra devote most of their
438 time to carrying various products to the surrounding mestizo markets. For instance, the women of the Pamatácuaro *ranchos* (Uringuitiro, Tierra Blanca, etc.) carry *ocote* splinters, wooden spoons, and tamales to Zamora, Chilchota, Patamban, and the Lake area.[170] Again, some women of Corupo collect eggs and chickens from surrounding towns and take them to the Sunday market at Uruapan.[171]

492 The *arrieros*, or the "mule-skinners," in spite of inroads of motor transportation, still account
443 for a large part of the interregional trade in Michoacán. Mule and burro transport came into
[177] use on a large scale in New Spain after the forced services of the *tamemes* were restricted in the last half of the 16th century (Spain. Law, Statutes, etc., Lib. VI, tit. 12, ley 6–10). Indians, however, were slow to adopt animal transport. Even in the latter part of the 18th century the majority of the muleteers operating in Michoacán were Spaniards or mestizos, who hired Indians as helpers. By 1789 some Tarascans owned mule or burro trains in Cherán, Urapicho, Angahuan, Charapan, and Pomacuarán (AGN Historia, vol.
[439] 73). Even today the greater part of the *arrieros* operating in the Tarascan area are mestizos with headquarters in some of the northern towns.

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[170] During such trips the women of these ranchos may be gone from their households for 3 or 4 days. In their absence housework is done by the children or the men, who rarely travel.

[171] Such rounds may last a week. The women visit Charapan, Zacan, Ziristo, Pamatácuaro on certain days, returning to Corupo by Friday, and arrive at Uruapan Saturday evening. Eggs are carried in a small crate held on the back with the *ayate*. Six or seven chickens are tied on the top of the box, and, in addition, many women carry one or two fowls in their arms.

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443 Like the *huacalero*, the *arriero* in the Tarascan
492 area has functioned chiefly as a commercial inter-
439 mediary between the *tierra caliente* and the *tierra fría*. During the colonial period, however, some mule skinners extended operations into the northern mining districts. Moreover, various mestizo towns in Tarasca became *arriero* centers—strategic points along the main routes where mule trains met, animals were sold and traded, supplies purchased, and merchandise exchanged. Such towns became residences of many muleteers. A series of these centers lies within the *tierra caliente* and includes Apatzingán, Huetamo, and Coyuca. Another series is located within the *tierra templada:* Uruapan, Ario, Tacámbaro. Other centers are found in the *tierra fría:* Cotija, and, formerly, Parangaricutiro and Jiquilpan. Most of these towns still function as *arriero* centers, and although motor transportation is continually replacing the mule and burro, some of them will continue to serve as way stations for fuel and repairs and collecting points for products carried out by trucks.

443 Since the construction of motor roads in many
494 parts of Tarasca, former *arrieros* and *huacaleros* have begun to use public busses and semipublic trucks to transport merchandise. Pottery vendors, for example, stand for hours along the highway, hailing through-trucks to take them and their goods to Guadalajara, Morelia, or Mexico City. Moreover, heavy sugar and *cascalote* trucks now operate from Uruapan, Pátzcuaro, and Los Reyes into the *tierra caliente*.

442 The wholesale buyers represent a modern type of merchant, who with the advent of road construction have begun to penetrate into the Tarascan area. Grain dealers from Morelia, Zamora, and Uruapan now run their trucks into the Sierra towns to buy surplus wheat. Again, many woodworkers in Paracho are on contract to city wholesalers for turned work and guitars, which are collected at intervals in trucks or passenger cars.